them[1] had upper respiratory infection due to congested and dusty environment. On previous observation may of hajj pilgrims were given antibiotic for their URTIs. Most of antibiotics prescribed to pilgrims were based on prescribers judgments.The study aims to determine the prevalence severity and the pattern of antibiotic usage. **METHODS:** This cross sectional study was conducted from December 2007 to January 2008. Validated self administered questionnaire forms were distributed to about 3,000 Malaysian Hajj Pilgrims in Makkah of Saudi Arabia. The severity of URTIs was based on the patient's perception and the number of symptoms. **RESULTS:** Majority, 87.1% of 2194 pilgrims reported had URTIs, 12.4%, (41.6%) and (46.0%) of pilgrims were categorised severe, moderate, and mild respectively. Antibiotics were prescribed to 58.8% pilgrims, the pattern of antibiotic used was associated with severity ($p = 0.001$) and the number of symptoms($p= 0.001$)and 55.1% of them had fever. Many of them(68.8%), take one course of antibiotic, while 28.5 % and 8.0% received two and three causes. **CONCLUSIONS:** A high prevalence of URTIs was found among Malaysian Hajj Pilgrims. Most of the pilgrims with moderate to severe and had fever received antibiotics. About one third of them, however, were not get benefit from first course of antibiotics. Proper antibiotic guideline that supported by microbiological studies are proposed to justify the use of antibiotics for hajj pilgrims.

PHP109

EVALUATION OF THE USE OF SEDATION FOR ADULTS USING MECHANICAL VENTILATORS IN A HOSPITAL IN TAIWAN

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OBJECTIVES: To evaluate the use of sedatives in critically ill adult patients with endotracheal tube (ETT) and mechanical ventilator (MV) in a hospital in Taiwan. **METHODS:** We conducted the study retrospectively by reviewing medical records. All patients with ICD-9, 96.71, 96.72, 96.04, from Oct 2008 to Feb 2009 were included. Patients were excluded if they were pediatric patients, without complete records, using MV after discharged, in regular wards, or using MV less than 24 hours. The primary end point is the duration of mechanical ventilation. The secondary end points were length of ICU stay, hospital stay and events of tracheostomy, reintubation, self-extubation. Chi square and t-test were performed for dichotomous and continuous variables respectively. SPSS (Version 13.0) was used. The data were log transformed to address the non-normal distribution. **RESULTS:** We collected 50 events of insertion of endotracheal tube with mechanical ventilator (ETT+MV) in using sedatives group and 163 in not using group. The duration of mechanical ventilation was not significantly difference between two groups. (p= 0.582) The using sedatives group had longer ICU (p= 0.04) and hospital length of stay (p= 0.001). There were much more patients were physically restricted in the using sedatives group (84% vs. 56%). The usages of sedatives were 50% of midazolam and 54% of propofol. The mean treatment duration among patients receiving midazolam was 4.6 days and 2.2 days among patients with propofol. This longer duration of length of stays were possibly related to the usage of midazolam and the prescribing habits of physicians. **CONCLUSIONS:** We found the physician preference by using physical restriction as first line and sedatives as second line did not benefit the critically ill patients. We will implement a sedation guideline to tailor the needs of our facility for optimal the patient care.

PHP110

REAL-WORLD DIAGNOSIS AND TREATMENT PATTERNS OF IRON DEFICIENCY ANEMIA IN CHINA

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OBJECTIVES: To investigate the real-world diagnosis and treatment patterns of iron deficiency anemia (IDA) in China. **METHODS:** Literature review, Key Opinion Leaders survey, and patient case review were conducted. The review was based on China Academic Journals Full-text Database (2006-2010). A total of 163 publications were targeted by searching in terms of IDA diagnosis and treatment. A total of 44 senior physicians specialized in nephrology, hematology and obstetrics/gynecology were selected from tertiary hospitals in Beijing, Shanghai, Guangzhou, Shenyang and Chengdu, who were requested to complete a questionnaire in two weeks. The structured questionnaire included IDA awareness, diagnosis, treatment and related drivers and restrictions. Information on Lab tests and treatments were collected from 91 patient cases. Descriptive analysis was performed. The results of KOL survey and patient case review were consistent, indicating the validity of the results. **RESULTS:** IDA was most likely found in patients in nephrology and obstetrics/gynecology, and in patients with chronic kidney disease on hemodialysis. Seventy-five percent of nephrologists, 58% of hematologists, and 25% of obstetricians/gynecologists reported the existence of hospital-wide guidelines for IDA diagnosis and treatment, respectively. Lab tests and cut-off for IDA diagnosis varied across different specialties and different physicians in the same specialty. Intravenous (IV) iron was more effective and caused less side effects than oral iron. IV iron sucrose increased hemoglobin level faster and greater than intramuscular iron dextran. Nephrologists usually prescribed IV iron as the first line, while hematologists and obstetricians/gynecologists preferred oral iron. Price was not the most influential driver for using IV iron. Fifty-seven percent of KOLs, however, reported the restrictions of IV iron use due to cost. **CONCLUSIONS:** Guideline-based diagnosis and treatment for IDA needs to be strengthened in China. Real-world prescription of IV iron for IDA varied across specialties and may be restricted due to cost despite its better effectiveness.

PHP111

DEVELOPMENT OF NATIONAL MEDICINE BRAND SUBSTITUTION GUIDELINES AND PILOT ASSESSMENT OF ITS ADOPTABILITY AMONG COMMUNITY PHARMACIST AND GENERAL PRACTITIONERS IN THE STATE OF PENANG, MALAYSIA

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OBJECTIVES: To develop national medicine brand substitution guidelines and assessment of its adoptability among community pharmacist and general practitioners in Malaysia. **METHODS:** A cross sectional postal survey was conducted with a sample of 100 community pharmacists and 100 general practitioners selected systematically in the state of Penang, Malaysia. A pre validated questionnaire was used for data collection. Frequencies and percentages were used to elaborate the data. SPSS v. 16 was used for data analysis. **RESULTS:** From a total of 200 questionnaires mailed, the response rate was 16% (n=16) for general practitioners and 36% (n=36) for community pharmacist. Majority of the respondents (n=53, 85.4%) disagreed that generic medicines lead to more side effect as compared to innovator brands. However, 59.6% (n=37) reported that Innovator brands are more effective than generic medicines. Moreover, (n=33, 53.2%) agreed that generics medicine are not bioequivalent to the innovator brands. Majority (n=40, 64.5%) stated that generic medicines should be available in same dosage form and strength as innovator brand medicines. Almost all respondents (n=52, 83.8%) demanded that dispensed medicines should be labelled with the generic (INN) name of the medicine with or without the brand name. While comparing with general physicians (n=13, 81.3%), community pharmacists (n=33, 91.7%) were in high favor that a written national generic brand substitution guideline is needed in Malaysia. In addition, all of the respondents strongly agreed to the statement that thorough counselling should be provided to the patients if their medicine is changed from innovator brand to generic in order to avoid confusion. **CONCLUSIONS:** Majority of general practitioners and community pharmacists in Penang agreed to the contents of the draft national medicine brand substitution guideline. This is a good indicator that the contents can actually be the foundation of an actual national medicine brand substitution guideline.

HEALTH CARE USE & POLICY STUDIES - Quality Of Care

PHP112

USAGE OF SELF-MONITORING OF BLOOD GLUCOSE (SMBG) BY DIABETES THERAPY TYPE IN LARGER CITIES IN CHINA

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OBJECTIVES: SMBG is one of the core components of diabetes therapy. It supports a safe and effective drug therapy and provides additional feedback on how diet and lifestyle impact blood glucose levels. In 2011 a Chinese guideline on SMBG was published. SMBG, in contrast to most diabetes drugs, is not reimbursed. This study aims to assess the level of SMBG usage in patients on different diabetes therapies. **METHODS:** 1st half year 2011 data (10,418 cases) from the CSD PDS Diabetes survey were used for this explorative analysis. PDS Diabetes is a syndicated research with a fixed representative panel of endocrinologists and cardiologists from 13 large Chinese cities. Patient cases are documented in a standardized format. SMBG usage was analyzed by therapy-subgroups: oral diabetes therapy only (OAD 54%), basal supported oral therapy (BOT 18%), conventional insulin therapy (CT 20%), intensive insulin therapy (IIT 6%) and OTHERS (2% - not reported). **RESULTS:** Ninety-five percent were patients with type 2 diabetes. A total of 5288 patients (50.8%) had a meter for home-testing. Shares of testers by therapies (OAD / BOT / CT / IIT) were 34.7%, 60.1%, 53.4% and 48.4%. Average weekly test frequencies were 2.8, 3.3, 3.0 and 4.0 respectively. In the IIT group 1% tested at least 3 times a day. HbA1c levels were by 0.2%, 0.5%, 0.4% and 1.2% lower in SMBG users. **CONCLUSIONS:** High share of patients don't have a meter to perform SMBG at home. For testers with BOT, CT and IIT test-frequencies remained clearly below the Chinese guideline recommending 10, 10 and 21 test per week respectively. For IIT (SMBG is needed to support insulin dose adjustments) only 1% tested at the guideline-recommende frequency. In IIT patients differences in HbA1 were largest between testers and non-testers. Further research is needed to clarify if e. g. education or reimbursement could potentially resolve these shortfalls.

PHP113

UTILIZATION OF FPG, HBA1C AND SELF-MONITORING OF BLOOD GLUCOSE (SMBG) IN COMMUNITY HEALTH CENTERS IN THE SHANGHAI AREA

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OBJECTIVES: Utilization of fasting plasma glucose (FPG), HbA1c and SMBG are considered core components of diabetes therapy. They support a safe and effective drug therapy and they provide feedback on the quality of glycemic control. In 2011 a Chinese guideline on SMBG was published. SMBG, in contrast to most diabetes drugs, is not reimbursed in China. This study aims to assess the level of SMBG usage with patients on different diabetes therapies in community health centers (primary care). **METHODS:** In 2012 a survey was conducted in community health centers in 6 districts of Shanghai. 935 random diabetes cases were documented in a standardized format. Subsequent explorative analysis were performed. SMBG usage was analyzed by therapy-subgroups: oral diabetes therapy only (OAD 84%), any therapy involving insulin (INSULIN 14%) and OTHERS (2%). **RESULTS:** 99% were patients with type 2 diabetes. FPG levels were available for 86% and 89% in OAD/INSULIN respectively, HbA1c levels were available for 32.0% and 19.4% respectively. For 124 patients (13.3%) SMBG usage was reported, for 111 of them actual test

frequencies were available. Shares of testers by therapies (OAD/INSULIN) were 10.0% and 21.8%. Physicians recommended an average of 5.9 tests per week, patients performed 2.8 (47.5%). For OAD/INSULIN test-frequencies were 2.8 and 2.2. Doctors rated the SMBG adherence as good or very good in 43% of cases. **CONCLUSIONS:** In community centers the vast majority of patients have type 2 diabetes. FPG values were broadly documented, but the therapy quality marker HbA1 is only available for the minority of patients. SMBG was more common with insulin users, but clearly below guideline recommendations. It needs to be determined which measures could potentially improve the current practice in diabetes care in order to strengthen the role of community health centers in managing the diabetes epidemic in China.

PHP114

FAILURE FOR COST-SHARING SCHEMES TO TAKE OFF IN INDIA: WHAT CAN BE THE ACCESS SOLUTION?

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OBJECTIVES: With high costs of some oncology and biological therapies, manufacturers have introduced patient access schemes in Asian countries including Indonesia, Malaysia, Philippines and China where the out-of-pocket is the main funding and access mechanism. These schemes have been welcomed by stakeholders involved including patients, clinicians and governments. Our objective was to understand why such programmes have not succeeded in India despite a large middle class and almost complete out-of-pocket funding for pharmaceuticals, and to find possible ways to overcome the hurdles presented. **METHODS:** The approach involved desk research followed by primary research across stakeholders in India. Twelve in-depth telephone interviews were conducted with stakeholders in the public and private sectors, NGOs, leading physicians and manufacturers. The information collected was assessed and analysed. **RESULTS:** Majority of the respondents (n=10) quoted bureaucracy and the informal economy, and thus difficulties with means-testing as the two most important reasons for the schemes not taking up. General ignorance about the potential of such schemes and cynicism surrounding them are a deterrent. Unethical medical practice, a great patient – provider knowledge gap and a lack of streamlined infrastructure for scheme delivery are thought to be important factors. Respondents confirmed that majority of the large middle class lacks access to innovative medicines for many diseases. The Gleevec patient access scheme was quoted by a few respondents as a rare example of such a scheme being run. Partnering with the public sector and NGOs was thought to be an alternative way out. There was mention of many local NGOs/charities which fund targeted oncology therapies for those with limited resources. **CONCLUSIONS:** India needs tailored, innovative ways of accessing high cost drugs for its local context being different from those in other countries in the region. Public-private partnerships involving large stakeholders such as the Ministry of Railways could be an option.

HEALTH CARE USE & POLICY STUDIES - Regulation Of Health Care Sector

PHP115

GEOGRAPHICAL DISTRIBUTION OF PHARMACIES VERSUS POPULATION: THE CASE OF TWO CAPITAL CITIES IN IRAN

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OBJECTIVES: Access to medications is one of the main goals of Iran National Drug Policy (NDP). Being a function of multifactors such as distribution of pharmacies, if the geographical access is observed, drug accessibility is gauranteed to some extent. The aim of this study is to compare the Geographical distribution of pharmacies versus population in two capital cities of Iran. **METHODS:** Two cities of Iran with strategical and transitional importance with cultural and socioeconomical differences (Khorramabad and Ahwaz) were selected. In the first step the population of different regions was collected from state government databases. Furthermore all of the pharmacies' locations in these two cities were detected through their Food and Drug deputies. The percent of population and pharmacies located in each region were calculated and compared together by differentiating relatad percents inorder to find an overview of present status of distribution and access to pharmacies. **RESULTS:** Ahwaz and Khorramabad, two west-southern cities of Iran, with a population of approximately 1,000,000 and 5200,000 are seperated to eight and three regions respectively. Unlike Khorramabad, an even distribution of population was found in Ahwaz. The differences in percent of population versus pharmacies in order from first to eighth region of Ahwaz were found as followed: 13.8, 3.9, -4, -8.3, 6.1, -2.6, -5.6 and -3.3. Those of the three regions of Khorramabad were -18, 17 and 1. **CONCLUSIONS:** The results show the distribution of pharmacies in both cities does not match that of population in most regions. However in one region of Khorramabad and three regions of Ahwaz the distribution was acceptable. This can be justified by the fact that physicians are mostly concentrated in few regions that attract the pharmacists. It should be noted that the suitablity of population and pharmcies' distribution is one of the most important factors in evaluating access to medicine.

HEALTH CARE USE & POLICY STUDIES - Risk Sharing/Performance-Based Agreements

PHP116

EQUITY IN THE NEW RURAL COOPERATIVE MEDICAL SCHEME: COMPARISON OF BENEFIT PACKAGES FOR CHRONIC DISEASE OUTPATIENTS IN 32 COUNTIES IN CHINA

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OBJECTIVES: Chronic disease has become a major problem affecting the health of the Chinese population. In response to this situation, the New Rural Cooperative Medical Scheme (NRCMS) has begun to provide health cover for outpatients with chronic disease expenses, made possible by the increased risk pool of recent years. We compared the differences between benefit packages for chronic disease outpatients in 32 counties, in order to assess their population reach, equity and cost implications and to formulate recommendations for policy makers. **METHODS:** Information on the various benefit packages was located by searching the official NRCMS websites in Chinese at the end of 2009. We developed a conceptual framework based on the three main criteria: 1) population coverage; 2) service coverage; and 3) costs with various subcriteris to compare benefit packages in 32 counties across China. Chronic diseases were classified according to the ICD-10. **RESULTS:** With the intention of avoiding "moral hazard" county NRCMS offices have developed complex processes to define benefit packages for chronic diseases. These have resulted in substantial differences in benefit package equity and cost between counties. In most counties chronic disease patients find it very difficult to become beneficiaries. Forty-one chronic diseases were identified in the 32 counties, varying between 4 and 28 per individual county. We also found large discrepancies in co-payment rates, deductibles, ceilings, coverage of drugs and tests, accredited hospitals and reimbursement frequency. **CONCLUSIONS:** Reimbursement procedures are remarkably diverse in different counties. Population coverage, service coverage and cost of benefit packages for chronic diseases vary substantially in the 32 counties studied. This reflects the new policy of decentralization of decision making to the county-level resulting in a "postcode lottery" of patient benefits. National regulation to redress these inefficiencies and inequities is urgently needed.

PHP117

STUDY ON THE HEALTH INSURANCE COVERAGE AMONG POOR AND DISADVANTAGED CITIZENS

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OBJECTIVES: To evaluate health insurance coverage rate among poor and disadvantaged citizens and study the cause and condition of not being involved in health insurance. **METHODS:** The sampling size was estimated by using the number of poor and needy in selected districts. By using multistage–sampling method, concentration of poor and poverty group among the total person of selected districts were calculated. There are sampling size at 5% sampling error (d=5%), confidence interval (CI=95%) and the influence of non-sampling error estimated. **RESULTS:** In the first years of health insurance in Mongolia, there was coverage achieved at 96-97%, but later it decreased because of diversity of employment's structure, increasing unemployment rate, and most influential factor as PHC was excluded from social health insurance. The result shows, HI coverage was 95.3% in 1998, but this rate was decreased till 84.4% in 2008. 95-97% of people who were involved in the survey, have lower income than living standard. According to the pattern of age, majority includes 26-35 aged economic hummers and as of gender, there were 44.79 % male and 55.21% female. To survey whether all people who were involved in the survey, got covered by health insurance last 3 years, there were 47.14% of them involved in health insurance. As forms of paying insurance fee, 17.3% paid insurance fee by voluntary, 49.17% paid by government and 33.7% paid by mixed forms. To survey on the health insurance coverage during the survey, 42.4% were involved. As forms of paying insurance fee, 27.61% paid by voluntary, 41.1% paid by mixed. **CONCLUSIONS:** The health insurance cannot protect poor and disadvantaged citizens from financial and other risks. People cannot be provided by equal and sufficient health services because of health insurance non-involvement, breach of citizenship identification paper and no registration of citizenship. The main reason of health insurance non-involvement depends on economic disadvantage and lack of information.

PHP118

THE ATTITUDE OF FARMERS TO THE NEW RURAL COOPERATIVE MEDICAL SCHEME IN THE NORTHWEST OF CHINA: A CROSS-SECTIONAL STUDY

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OBJECTIVES: The implementation of the New Rural Cooperative Medical Scheme (NRCMS) has been spreading fast since a county pilot trial began in September 2003. The purpose of this survey was to guide policy makers of Huxian county and ultimately improve the current national NRCMS policy. **METHODS:** Cross-sectional survey of the attitudes of farmers towards the NRCMS conducted in 2005. A total of 1978 farmers living in 50 villages in Huxian Shaanxi Province were surveyed using a door-to-door questionnaire. The survey asked farmers questions regarding their awareness of the NRCMS and their opinions of the scheme, including methods of reimbursement and raising funds and concerns regarding the scheme's sustainability. **RESULTS:** Most farmers hold a positive attitude towards the NRCMS. There are issues, however, in regard to the farmers' trust in the scheme and preferred payment methods. Farmers place more trust in village doctors rather than village cadres for fund collection. More than two thirds of farmers visit county-level hospitals directly when they require inpatient treatment. Not all hospitals and doctors fully comply with the NRCMS rules, and supplier-induced demand is still widespread. More than half the farmers stated that they worry that the NRCMS is unable to be sustained. Importantly the survey showed a high enrolment rate of 92% (95% CI, 91; 93) in a voluntary insurance scheme. **CONCLUSIONS:** Despite a